Technical Notes

• NATIONAL SOCIETY FOR BUSINESS BUDGETING •

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This month's contributors are Philadelphia Chapter members. Charles A. Pfahler, Sun Oil Company, Contributing Editor from the Quaker City, was responsible for our publication of the following two articles, representing digests of talks made by R. Visscher Millar and Horace G. Hill, Jr. Mr. Millar illustrates "Manufacturing Control Through Budgets" at his company, the Pennsylvania Salt Manufacturing Co. Mr. Hill draws on his experience at the Atlantic Refining Company in portraying the means and advantages of budgeting capital expenditures.

The Question Box contains a question that is answered by Philadelphia Chapter members.

MANAGEMENT CONTROL THRU BUDGETS

R. Visscher Millar - Pennysivania Salt Manufacturing Co.

ACCOUNTANTS IN BUDGETING

An Accountant's duties are varied. Sometimes he wears the historian's hat, putting down in the record the events of business life in terms of quantities and dollars. Much of the time Mr. Accountant is a reporter. He looks at the record he has compiled and interprets it. The diary of the company is kept by the Accountant and he is called upon whenever factual references are needed.

Knowledge of the Company and the accounts of course are essential for this work. So too is appreciation of the needs of those to whom he is sending data. The President is more likely to want over-all totals than minute detail. Department Heads want information about their own bailiwicks -- not general Company data.

He has another function often glossed over too lightly. I call it "What if..." Management gets interested in a project -- a reorganization, a new line of sales, or purchase of another company. In evaluating it they need an estimate of the probable effect on Profit. "What will it do to our tax picture?" "Will the increased selling expense be justified?" "How does return on investment look?" And a myriad of other questions that need careful, accurate answers before the final decision is made.

Under the "What if..." hat he has to find a crystal ball for he is looking into the future. Sometimes past performance yields a clue to probable effects of the proposed action. But often he must work by "seat of the pants." He is now approaching the field where he can be of maximum service to Management. When he is a "What if..." man he is interpreting a proposal in figures. But one can't add paragraphs and chapters into New Profit -- it is only the dollars and cents that can be so treated.

One of the more interesting aspects of such work is that, in effect, Mr. "What if..." Accountant stands beside Management looking at these plans. He is acting as Management's interpreter and as Management's test kit. He must see through Management's eyes.

Now we come to a newer segment of our Accountant's operations...his Budget hat. Wearing it, Mr. Accountant extends his "What if..." service to Management to a continuing function. Periodically he sets down a record of the future very much like the record of the past that is a more traditional duty. Also periodically, but usually more frequently, he sets the past and the future records side-by-side and compares them for Management.

Mr. Budget Accountant needs some additional talents for his work, such as the delicate one of acting for Management as a policeman, but most of the requirements are similar to those of other aspects of his work.

The very nature of Mr. Accountant's work as a Historian, a Reporter and a "What if..." man assure that most of the abilities of a Budget Director are developed. For proof of this, consider how many effective Budget men you know who came up through Accounting.

A CASE HISTORY

Before we paint "Budget Director" on Mr. Accountant's door, let us see what the job includes. We want an Operating Budget. A plan of operations for a stated future period expressed in figures which is sufficiently complete so that a reasonable estimate of Net Profit may be obtained.

I propose to submit for your consideration Pennsalt's Operating Budget as a case history. It is by no means a finished product, although there are six or seven years of development behind it. But it does represent an integrated program that has been built step by step.

BUDGETING PRINCIPLES

First, for some of the principles on which Pennsalt's Operating Budget is based ...

1. A forecast or Budget is always made by the operating unit that is responsible for or knows most about the phase of Profit being considered.

2. Although all Forecasts and Budgets are approved by higher levels and ultimately by Top Management, the figures as submitted are never changed unless the responsible operating executive agrees.

In Pennsalt operating budgets in the plants are set by the Standards Committees. Typically they consist of the Plant Accountant, the Foreman of the Process, his superior the Process Supervisor, and someone from the Engineering Department. That group estimates costs at each level of operations of the process; after approval by the Plant Superintendent this becomes the Budget.

Of course, usually it is not very difficult for the Plant Superintendent to convince the Committee that the Budget is too high. But this consultation between the two levels is more than a matter of form. Through it the Committee and every member of it -- notably the Foreman -- have ample opportunity to protest the reduction and if everyone agrees, later they cannot complain that it has been "railroaded." The Budget still belongs to the Committee; it has not become an arbitrary Management goal or "bogie."

The same principle holds in Sales Forecasting and Expense Budgeting. If a Sales Manager's estimate of future business is too high in the judgement of Management, the Sales Manager is brought into agreement before it is reduced. Or if a Division Head believes one of his Department Managers has omitted an important item from his Expense Budget, he is consulted before it is added.

"...the figures as submitted are never changed unless the responsible operating executive agrees."

3. No single Forecast or Budget is approved until its relation to others and especially to the Budget of Net Profit have been studied.

Consider a process with two alternative end products that cannot be manufactured simultaneously. Pennsalt in its Persulfate plant makes either Ammonium Persulfate or Potassium Persulfate. The plant shifts from one variety to the other rather readily but they cannot make both at once. Obviously the Potassium Persulfate Forecast of Shipments cannot be related to plant capacity without considering also the Ammonium Persulfate Forecast.

There can be only one Operating Budget -- the Budget of Net Profit. All other Budgets are subsidiary to and a part of the summation.

4. Every Forecast or Budget figure has its actual counterpart. In building the Budget care is taken to assure that every estimate can be compared with actual results.

Early in 1946 the Vice-President of Sales greeted my return from Uncle Sam's employment with this assignment. "In December 1944 I asked the Sales Managers to let me have a complete Forecast of Sales for '45. They worked it up carefully and we thought it was pretty good. But in total it was more than 25% off. I want you to go over it and tell me what went wrong."

I never completed that assignment. Even several weeks of comparing the Forecast for '45 with the Sales totals of the Accounting Department got me nowhere. It was like comparing chickens with bulldozers.

Sales had stuck consistently to the grouping of products they worked with. There was detail only as detail was important to them -- and you will understand that was infrequently! Accounting, on the other hand, assembled their data by plants, without regard to Sales Departments. (In Pennsalt, there is no correlation between the two organizations. Sales is broken down by the

industry-consumers. Plants are organized generally by availability of raw materials.) So where products were sold by two or more Sales Departments it was almost impossible to sort out the shipments.

Again, Accounting would put all grades of an acid on one basis -- say 100%. But Sales, not interested in strength of the acid, had added their figures on the basis of the strength shipped. 20% and 80% were lumped together. Comparison was almost impossible.

That was an excellent example of failure to match Forecast or Budget and Actual. From that mistake came a major program of standardizing on the identification of products in accordance with the needs of Sales, Production and Accounting; after that came a reorganization of Sales Accounting, so that records could be added either by Sales Departments or Plants. Those steps had to be taken before what is now the Pennsalt Sales Forecast could be born.

5. For every Forecast or Budget there is a Performance Report. The Forecast of every product in the line is compared to actual Sales. Costs are compared -- both volume and spending variances are determined. As the year progresses expenses are compared item by item with Expense Budgets, and when it is finished over-all comparisons are made. There are Budget Reports even on Income Taxes and Non-Operating Earnings.

The reasons for this insistence on comparison of Budget with Actual are several. In the first place, the interest of those doing the Budgeting is maintained if they see how their "guestimates" came out. They are reminded of them and given ample opportunity to question them.

Secondly, from these Performance Reports have come many improvements in both Accounting and Budgeting. A department Head finds that he has been charged for an expense that actually should have gone to a neighbor's account. He lets Accounting know about it -- be sure of that! Recurrence of those errors results in improvement of the charging system. Or suddenly the Personnel Department finds their Budget for Company premiums on Group Insurance is being badly exceeded. A Plant Superintendent made a change in his part of the Plan unbeknownst to Personnel. The answer? The Budget was wrong; that item should have been in the Plant Budget -- not Personnel's.

Finally, Performance Reports constitute a record that is valuable for preparation of future Budgets. If they are on a cumulative basis, the end of the year Reports are about all the "history" needed for work on the following year's Budgets.

PENNSALT

Before getting into the mechanics of assembling Pennsalt's Operating Budget, let me introduce you to the Company. To understand the methods we use you should know that we are manufacturers of a wide variety of industrial and specialty chemicals. (The "Salt" in our name, by the way, comes from our use of the old staple as a raw material. We do not sell salt!)

Sales are about $60 million on an investment of $90 to $100 million. We have nine plants at points from coast to coast and from Philadelphia and Detroit in the north to the Dallas, Texas area in the south.

Our organization is rather simple. Under the Board is the President with a small personal staff. Reporting to him are the Vice-Presidents and several other Division Heads. The Vice-President of Sales has nine Sales Managers, each heading a Department which serves a separate group of industries. Each Department is fully integrated, with national coverage and Regional and District Sales Managers as necessary.

The Vice-President of Manufacturing, on the other hand, has his Plant Superintendents -- one for each of the smaller plants, and one for each major function in the larger ones. As I have already mentioned there is little or no relation between Sales organization and Plant organization.

Finally there are the Financial Division and other units in the administrative group. Pennsalt includes the Research and Development Division with these latter.

This type of organization simplifies the construction of an Operating Budget. Following the usual Profit and Loss Statement, we get the Sales Division to do the Sales Forecasting, Manufacturing to give us Cost of Goods Sold, and each of the Division Heads the Selling and Administrative Expenses. The programming and coordination are done by a small group under the Secretary and Treasurer.

BUILDING THE BUDGET

The Operating Budget itself is an annual affair. All elements of Net Profit are Budgeted by months for a year so that we come up with monthly Profit figures as well as the annual one.

The first step is the overall target. The President and his staff set the keynote for the operation by specifying the Sales and Net Profit expected for the following year. This is a matter of deciding on the totals; it is not done from a detailed approach. Economic factors are carefully considered and the only Company angle is the effect on Sales and Profit of important plans for the new year.

Upon receipt of the Target from the President the Budget group passes it along to the Vice-Presidents and the Presidents of the Subsidiary Companies at the time the Budget schedule is announced. We have, therefore, a direction established for these Executives to follow in evaluating the detail that will follow later.

FIRST PRELIMINARY FORECAST

Now we turn to the Sales Manager to start us off on building the detail. You will observe in Exhibit I that we give as much data as is available for the current year to help in Forecasting the next one. As this was started in late July of 1953 we could give the Sales Manager only six months record for the first stab at 1954.

The product is clearly defined -- by name and code number -- and the unit and the basis are also shown. One thing that the experience with the 1945 Sales Forecast taught us was to be exact in these matters.

We also call for a Forecast of shipments from each of the several plants where such an approach is applicable.

For each Plant the Sales Manager at this stage has the first two lines of the new year to fill. We make it as easy as possible for him. He uses arrows to repeat figures and shows the total year only if he wishes. All work is in pencil and there is no laborious typing or "dressing up." All we ask of him is volume of sales and expected price.

These so-called Forecast Books now come down to Forecasting and Statistics which is their permanent home. The people there do the extending, multiplying volume times price, and adding. Totals from each shipping point for the year, and totals from all shipping points are derived. Then they add the products for a total for each Sales Department, which enables them to prepare the summary that is shown in Exhibit II.

You will note in the Exhibit that only ten products are listed. Actually this Department sells and is forecasting more than 40. But those ten constitute 80% of the Sales Forecast for the Department and consequently are worthy of nearly all the attention from this point on. We consolidate the other 30 items into "Other Products" and do not again list them in detail.

The summary goes back to Sales and it is the first time that the Sales Manager knows what the total is. We call it the "First Preliminary Forecast" and consider it so much a "shot in the dark" that it doesn't even go to the Vice-President of Sales. We recognize that since it was developed without regard to total dollars, a great deal of adjustment is necessary.

The Forecast Book itself does not go back to Sales -- instead a photographic copy together with the Summary is sent. The original pages are on transluscent paper to facilitate this shortcut. Sales uses a simple form for making the changes, noting their ideas on it in pencil with no copies and sending them directly to the Budget group. There the changes become new pages in the Forecast Book, and through a "control" the totals are adjusted.

Thus, assuming that the group keeps abreast of the volume of changes, we know at any time what the current total is, and can report to the Sales Manager how he stands even by telephone.

SECOND PRELIMINARY FORECAST

The Budget group now turns to the Cost System for "$ Cost Unit." And here we find ourselves up against that old "chicken-and-the-egg" routine. Which comes first?

Sales maintains they cannot price without an estimate of costs; and without pricing they cannot do a good job on forecasting volume. On the other hand, Manufacturing says they cannot estimate costs without good volume forecasts. There is much to be said on both sides, and our Budget group would be presumptuous to say either Sales or Manufacturing is wrong.

Instead of that everyone compromises. We use the current year costs at this stage to apply against the next year's volume Forecast. That gives Sales enough information to firm up their Forecasts, and then Manufacturing can work out the next year's cost estimates. This compromise requires that the Budget group have a very flexible procedure for they must pick up Sales Forecast changes and the new costs as quickly as they come through.

So the current year's costs are applied to the next year's Sales. Again, this is done on the original pages of the Forecast Book, and new summaries are prepared like that shown on Exhibit III. You will note that we have added costs to the summary.

At this point the volume information is passed on to the plants as very preliminary figures subject to considerable adjustment. Although they are not too reliable at this stage, they are a starting point, and Standard Committees start work as soon as they are received.

Forecast of Shipments received by the Plants is shown in Exhibit III. Note how the products are broken down into shipments and captive uses. This is an essential step, for the Foremen and their superiors are interested in what they will have to manufacture, regardless of whether it is going to the customers as finished goods, or to other cost centers or other plants for further processing.

To review: At this point in the development, each Sales Manager has a photographic copy of his Forecast Book revised to date, with a summary showing costs. The Vice-President of Sales has an over-all summary and is ready to start consultations with his Sales Managers. The plants have these early figures and where possible, are at work building the new year's costs.

THIRD PRELIMINARY FORECAST

Next are the Expense Budgets, like the one shown in Exhibit IV. Using one of the Expense Budget Progress Report forms, the Tabulating Department prepares worksheets for this step, showing the Expense Budgets for the current year, and the actual expenses for current year so far.

There is one of these Budgets for each of the Non-Selling Departments and several for each of the Sales Departments. As far as Sales is concerned, the most important distinction is between those selling expenses that are readily and accurately chargeable to products and those which go directly to the Headquarters of the Department. For instance, in the so-called "Product Selling Expense Budget" we include commissions to outside brokers where applicable, many of the ads on our products, and much of the direct mail activity. Cost of package labels -- which in Pennsalt is considered selling expense -- and depreciation on returnable containers also fall into this category.

We get a Budget on these Product Selling Expenses by products -- so many dollars in total, or so much a percent of sales, or so many cents per pound sold. These figures are applied on the next to the last line of each block on the Sales Forecast pages, as you will see in Exhibit IV.

Having a Sales Forecast, a Budget of Cost of Goods Sold (albeit based on the current year costs), and Product Selling Expenses for each product, we develop Product Earnings. The attempt here is to limit this level of Earnings to those items that are readily and accurately chargeable to products -- so that one may be compared with the other, and each with its own history without the confusion of pro-ration and allocation of over-all charges. Product Earnings are added for each Sales Department to give a pool from which that Department will deduct its general expenses.

The latter are those expenses which are readily and accurately chargeable to the Department but cannot be so charged to the products sold by that Department. For instance, Salesmen's Salaries and Expenses: With a widely varied line such as most of our men are selling, no good formula ever has been developed for spreading such items to the products. We charge these general expenses to the Department and they are deducted from the pool of Product Earnings that already has been worked out.

So we have two Budgets for most of the Sales Departments -- Product Selling Expenses and General Expenses. In addition there are the Budgets of the Administrative Units. With these turned in to our Budget group, the summaries shown in Exhibit V can be worked out.

First there is the summary of the Forecast Book, showing Product Earnings for the major products -- Sales, Cost of Goods Sold and Product Selling Expenses. Then we come up with the Department Earnings Statement on the left, where we have deducted from the total of Product Earnings the Headquarters and Field Expenses. And on the right is a type statement for the

Company. Here we make the further deduction of the Sales Division Staff Expenses and Administrative Expenses for Operating Earnings.

All of these proposals are preliminary at this stage, none having been approved by even the second level of Management. They are simply the first attempt to fit together the pieces of the jig-saw puzzle, but the picture is hazy and distorted. Here Division Heads come into action. The Vice-President of Sales weighs Expense Budgets against Sales Forecasts and direct adjustments. The Vice-President of Manufacturing begins to shape up his costs for the next year and gets the expenses of his Staff Departments in line.

Inter-Departmental operations such as the Research and Development program already mentioned are brought into line. There are conferences at all levels, and Budgets and Expenses are foremost in thinking of nearly everyone in the Supervisory group.

FOURTH PRELIMINARY

Out of it all comes the penultimate Budget, complete with Parent Company and subsidiary plans. Every element has been reviewed and very few have come through the process unchanged. The balance between expense and income has been adjusted; new products, new plans, and new facilities have been brought in to the picture. The latest estimates of the national economy have been searched for their effect on the Company. We are ready now for the summary shown as Exhibit VI, the one that is presented to Top Management.

This is usually a lengthy conference with the President, the Treasurer and the head of the Budget group supplying detail as requested from the mass that lies behind this summary. Division and Department Heads are called in for discussion of detailed figures ... and very little change is likely to be made. Generally because of the intense work of the preceding months the President "buys" the Budget.

THE BUDGET

Approval accomplished, Pennsalt now has its next year's plan spelled out in figures both in detail and summarized to the ultimate Profit and Loss Statement. It is a fixed picture comparable to the artist's conception of the family car of 1983. It becomes a matter of record and a bench mark for comparison as we progress through the actual events.

THE LATEST ESTIMATE

But an estimate of the future cannot be a fixed thing. Our artist's automobile must be redesigned when the internal combustion engine is replaced by a nuclear fission power plant with built-in fuel for the life of the car. He must adapt his impressions as new factors become apparent.

So with the Budget. To say in the Fall of 1953 what December of 1954 will be like is an approximation at best. Production cannot lay out its Fourth Quarter plans on that basis alone. The Treasurer cannot plan his cash on such a long-range guess.

And that is where the "Latest Estimate" comes in. The Budget -- the approved, fixed, finalized Budget -- is our permanent reference. But the Latest Estimate is a fluid, changing picture that reflects every new situation the Budget group can reduce to figures. This latest Estimate is built by extending the Budget principle. Just as the responsible Department Head, or the Department Head closest to an income or expense item, budgets it, so that same man also contributes to the Latest Estimate. He is responsible to report to the Budget group any change in the figures under his aegis. Sales Forecasts, new cost estimates, new or deleted or increased or decreased expense items, different tax applications . . . . all of these figures are reported to the Budget group as they occur.

There is no periodic review; rather it is a channel of communication that never closes and that is greased for speed and simplicity. There are no forms, very little fixed routine, and only a few limitations. A Plant Superintendent can change a cost estimate by sending in a spare copy of the new data sheet. A Sales Forecast can be changed by a phone call. The Budget group may pick up a tax change in the newspaper, check with the Tax Accountant and introduce the change into the Latest Estimate. It is as simple as that.

The limitations to all these changes? They are simple and rather obvious. First, a figure for a month may not be changed once we are in that month. Second, no Expense Budget may be increased without Division Head approval. Third, the Budget group may refer any change to a Division Head or the President if it is believed to be of sufficient importance.

I can see that you are quailing at the thought of the mass of detail required to keep up with all these changes. You are right -- there are many figures and it is exacting work to keep abreast of them. But we have two important short-cuts that relieve the burden considerably.

Remember the "major product" concept mentioned in connection with one of the early summaries of the Sales Forecast? That is carried throughout the year. After Sales, Production, Finance and the Budget group have agreed upon a list of major products, all of the others are put on a shelf . . . 'way in the back with a lot of heavy ledgers in front of them. We don't want any part of them, discourage changes in figures applying to them (and rarely get them), handling them as a total, "Other Products." For Sales Forecasts, Budgets of Cost of Goods Sold, and Budgets of Product Selling Expenses, this means reduction of the figure volume by more than 70%.

Secondly, we keep control figures on all the elements of Net Profit. These start with the first totals derived in each classification -- Sales, Costs, Expenses and Taxes. Then when an item changes we subtract the old and add the new continually showing the new totals. Occasionally we add all of the detail in one classification as a spot check on our control -- but rarely is that necessary.

Thus, with a careful procedure within the Budget group to assure complete processing of every change, we are able to handle the whole job among six or seven clerks and clerk-typists.

Before I leave this "Latest Estimate" concept I want to emphasize the difference between it and the Budget. The Budget is a fixed guide that remains unchanged throughout the year. It is a summation of what each Budgeting Executive says is his plan for the coming year.

The Latest Estimate, on the other hand, is just what it is titled -- the latest and best guess as to what actually the year will turn out to be. It is constantly changing and considerable effort is made to include in it anything that can affect Net Profit.

PERFORMANCE REPORTS

On the left of Exhibit VII you will see how we show Daily Sales to Management. We break them down within the Parent Company by Sales Department, and show the more important subsidiaries by a total for each. The current sales are compared to the Latest Estimate -- not the Budget -- and to the figures at the comparable period of last month. Note that the entire Summary is cumulative, month-to-date.

And on the Daily Sales Summary are our thermometers -- quick, graphic comparisons of Actual vs. Latest Estimate. We use those columns to highlight interesting figures that might otherwise be buried in the statistical data. On the statement shown we have selected one of the Sales Departments; but we might show Parent Company's Sales to Customers, or one of the subsidiaries, or the Consolidated total, or even a section of one of the Sales Departments.

This Summary is on the readers' desks by 9:15 each morning covering the previous days' billings.

On the right side of Exhibit VII is our flash "Budget Report". We get it out monthly, and often it is the first report on a set of figures to reach the Management level concerned.

Here, for instance, we show the volume -- not dollars -- of a major product. On the chart is a cross-hatched column for the fixed Budget that was approved, in this case, in December 1952. Beside that is an open column for the Latest Estimate. And the lines shows the Actual. This chart is cumulative, year-to-date -- hence the general upward trend. You can see from the statistics on the lower half, that the line representing "Actual" at 10 months of the year is 13% over the original fixed Budget, and 10% over the Latest Estimate. For the ten months the Sales Manager raised his estimate 1,700 cases over the original Budget, but actually he shipped 8,300 cases more than his Budget. A pearl among Sales Managers: a conservative!

These Budget Reports cover the gamut of the Operating Statement -- Sales, Costs, Expenses and Income Taxes. They are flashes -- inexpensive to produce and rather widely distributed. No one is expected to file them; the intention is that the recipients check them briefly and toss them out.

Exhibit VIII shows our Directors' Report. This is a small collection of Operating Statements, Balance Sheets, and statistical miscellany carefully compiled for quick digestion by our Board. To the left is data for the month -- in this case December. To the right is the year-to-date information. (These are actual figures, by the way, for the year 1952).

Every actual figure on the statement has its Budget counterpart. In '52 our Monthly Budget was a simple 1/12 of the Annual one. Since then we have refined the procedure to more accurately prepared estimates.

At the Board's special request the fixed Budget data are included in this Report, rather than the ever-changing Latest Estimate. They maintain that the comparison is between the organizations' plan and its results. Aside from the fact that there is excellent reasoning behind such comparison, we wouldn't be the ones to argue with them, anyway!

But they want the Latest Estimate, too. On the Statement No. 1 that is depicted in your booklet we overlay an insert (not shown) covering columns "E", "F", "G", and "H". There we apply our Latest Estimate figures for the balance of the year to the actual up to that point, coming up with our best guess as to what the year will be. It makes very interesting comparison with the original fixed Budget.

These are just some of the Performance Reports that flow from our Budget group to the various levels that worked out the figures initially. There are others, some tabulated and some manual. We try always to keep them current and readable.

ORGANIZATION AND EVALUATION

So there you have it: an integrated Operating Budget is a medium-sized manufacturing Company. Parts of it six or seven years old, parts being tried out for the first time for 1954. In my humble opinion it can be a real Management tool. It needs simplification, greater sensitivity, and wider acceptance before it has attained that goal. But the way from here to the goal is much smoother than the road we've already traversed.

I want to come back for a moment to our friend, Mr. Accountant. I said earlier that if that man has the few necessary additional talents to be the Budget Director, there is no better man in the Company for the job. He has the training and the background to make the mass of detail of the Operating Budget a simple problem. He has accessible to him a picture drawn in figures that covers every corner of the Company. His training in "What if . . . " analysis has taught him to look at the future with respect and estimate it carefully.

So if in your Company there is need for a coordinated Operating Budget that has not yet been filled, I urge that you take the lead in the operation. If your Budget is fully developed and under another's control, back him to the limit with the actuals for comparison with his estimates. Your association with Budgets will bring you closer to the Management viewpoint than almost any activity in your sphere.

EXHIBIT I

PRODUCT D (Product) — Lb (Unit) — Basis — 8641 (Code)

		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Year
		From Plant 3												
1953	Units	343,400	343,800	234,500	202,000	256,800	332,00							
	$ Sales/Unit	0.0462	0.0466	0.0451	0.0456	0.0458	0.04							
1954 Budget	Units	300,000												
	$ Sales/Unit	.0463												
	Net Sales													
	$ Cost/Unit													
	Cost of Goods Sold													
	Product Sell. Exps.													
	Product Earn.													

PRODUCT C (Product) — Case (Unit) — Basis — 7469 (Code)

		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Year
							From Plant 4							
1953	Units	12,100	6,090	10,600	7,700	7,600	3,750							
	$ Sales/Unit	2.7507	2.7144	2.6177	2.7070	2.6684	2.7054							
1954 Budget	Units	[illegible]			5000			8,000					2,000	68,000

PRODUCT B (Product) — Gal (Unit) — Basis — 1477 (Code)

		Jan	Feb	Mar	Apr	May	June
							From [illegible]
1953	Units	24,350	40,900	34,820	24,400	22,740	45,50
	$ Sales/Unit	0.2750	0.2760	0.2758	0.2653	0.2749	0.273
1954 Budget	Units	10,000			20,000	25,000	
	$ Sales/Unit	.2700					
	Net Sales						
	$ Cost/Unit						
	Cost of Goods Sold						
	Product Sell. Exps.						
	Product Earn.						
							From Commercia
1953	Units	1,112	1,954	1,552	1,620	1,152	1,437
	$ Sales/Unit	0.2850	0.2960	0.2958	0.2853	0.2949	0.293
1954 Budget	Units	4000					
	$ Sales/Unit	.2780					
	Net Sales						
	$ Cost/Unit						
	Cost of Goods Sold						
	Product Sell. Exps.						
	Product Earn.						

PRODUCT A (Product) — Lb (Unit) — 100% (Basis) — 0872 (Code)

		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Year
							From Plant 1							
1953	Units	1,615,566	1,381 181	1,796,013	1,856,147	1,805,902	1,860,665							
	$ Sales/Unit	0.0312	0.0305	0.0309	0.0327	0.0319	0.0312							
1954 Budget	Units	[illegible]						2,400,000						25,500,000
	$ Sales/Unit	.0310												
	Net Sales													
	$ Cost/Unit													
	Cost of Goods Sold													
	Product Sell. Exps.													
	Product Earn.													
							From Plant 6							
1953	Units	177,529	155,402	186,335	191,420	188,973	182,957							
	$ Sales/Unit	0.0322	0.0315	0.0319	0.0337	0.0329	0.0322							
1954 Budget	Units	[illegible]												2,400,000
	$ Sales/Unit	.0330												
	Net Sales													
	$ Cost/Unit													
	Cost of Goods Sold													
	Product Sell. Exps.													
	Product Earn.													

SALES DEPARTMENTS FORECAST
VOLUME AND PRICE....

EXHIBIT II

....BUDGET GROUP EXTENDS, PREPARES COMPARATIVE SUMMARIES AND RETURNS TO SALES.

PRODUCT A — Product | lb — Unit | 100% — Basis | 0872 — Code

		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Year
							From Plant 1							
1953	Units	1,619,566	1.381,18	1,796,013	1,856,147	1,809,902	1,860,665							
1953	$ Sales/Unit	0.0312	0.0309	0.0309	0.0327	0.0319	0.0312							
1954 Budget	Units	1,850,000						2,400,000						25,500,000
1954 Budget	$ Sales/Unit	0.031												
1954 Budget	Net Sales	57,350	57,350	57,350	57,350	57,350	57,350	74,400	74,400	74,400	74,400	74,400	74,400	780,500
1954 Budget	$ Cost/Unit													
1954 Budget	Cost of Goods Sold													
1954 Budget	Product Sell. Exps.													
1954 Budget	Product Earn.													
1953	Units	[illegible]												
1953	$ Sales/Unit													
														2,400,000
										6400	6400	6400	6400	76,800

1954 BUDGET

First Preliminary Forecast of Net Sales - August 20, 1953

Department I - Section 2

		UNITS 1954 Forecast	UNITS 1953 7 Mos. Actual	DOLLARS 1954 Forecast	DOLLARS 1953 7 Mos. Actual
2110	Product A	51,160,000 Lbs	1[illegible],531,995 Lbs	$1,233,800	$395,723
2130	Product B	24,960,000 Lbs	9,239,274 Lbs	631,872	232,145
2610	Product C	8,760,000 Lbs	5,639,225 Lbs	353,640	209,948
7060	Product D	3,600,000 Lbs	4,474,681 Lbs	342,000	412,111
8110	Product E	34,300,000 Lbs	18,798,900 Lbs	970,690	505,358
8310	Product F	14,000,000 Lbs	6,330,000 Lbs	518,000	215,919
8320	Product G	10,600,000 Lbs	6,038,000 Lbs	566,000	308,056
8410	Product H	10,000,000 Lbs	5,235,709 Lbs	721,200	396,523
7301	Product I	18,000,000 Lbs	0	1,080,000	0
5114	Product J	3,660,000 Lbs.	2,103,760 Lbs	732,420	417,957
	Other Products			1,478,292	619,452
	TOAL				
	TOTAL SECTION			$8,627,914	$3,713,192

SALES REVISES AS INDICATED BY THE "TARGET"

EXHIBIT III

PRODUCT A — Product | Lb — Unit | 0872 — Code

		Jan	Feb	Mar	Apr	May	June	July	Aug
From Plant 1									
1953	Units	1,619,566	1,381,181	1,796,013	1,856,147	1,809,902	1,860,665		
	$ Sales/Unit	0.0312	0.0309	0.0309	0.0327	0.0319	0.0312		
1954 Budget	Units	1,850,000	→					2,400,000	[illegible]
	$ Sales/Unit	0310							
	Net Sales	57,350	57,350	57,350	57,350	57,350	57,350	744[illegible]	[illegible]
	$ Cost/Unit	0250							
	Cost of Goods Sold	46,250	46,250	46,250	46,250	46,250	46,250	6[illegible]	[illegible]
	Product Sell. Exps.								
	Product Earn.								
From Plant 6									
1953	Units	177,529	199,402	186,335	191,420	188,973	182,99[illegible]		
	$ Sales/Unit	0.0322	0.0319	0.0319	0.0337	0.0329	0.03[illegible]		
1954 Budget	Units	[illegible]							
	$ Sales/Unit	[illegible]							
	Net Sales	[illegible]							
	$ Cost/Unit	[illegible]							
	Cost of Goods Sold	[illegible]							
	Product Sell. Exps.	[illegible]							
	Product Earn.	[illegible]							

Second Preliminary Forecast of Shipments

PLANT 4 - COST CENTER 024

Code	Product	Unit	Jan. Jul.	Feb. Aug.	Mar. Sep.	Apr. Oct.	May Nov.	Jun. Dec.	Year
2041	Intermediate Product 1	Ton	1,896 1,903	1,638 1,893	1,906 1,944	1,830 1,907	1,753 1,926	1,845 1,641	22,082
2061	Product E-1	Ton	100 100	100 100	100 100	100 100	100 100	100 100	1,200
2061	Product E-2 - Shipments	Ton	365 365	365 365	365 365	365 365	365 365	365 365	4,380
2061	" " - Captive Use	Ton	683 3[illegible]	[illegible]	265 339	477 275	306 149	[illegible]	4,502
2065	" " - Total Requirements	Ton	[illegible]	630 704	842 640	671 514	[illegible]	[illegible]	8,882
	Product E-2a		[illegible]	200 300	300 300	[illegible]	[illegible]	[illegible]	2,825
4061	Intermediate P[illegible]		[illegible]	3 3	3 3	[illegible]	[illegible]	[illegible]	60
4061	Capti[illegible]		[illegible]	1 0	0 0	[illegible]	[illegible]	[illegible]	3
	Pr[illegible]		[illegible]	88 38	[illegible]	[illegible]	[illegible]	[illegible]	1,003
	[illegible]		[illegible]	10 10	[illegible]	[illegible]	[illegible]	[illegible]	120
	[illegible]		[illegible]	9	[illegible]	[illegible]	[illegible]	[illegible]	1,123
	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40

1954 BUDGET

Third Preliminary Forecast of Net Sales and Cost of Goods Sold - October 14, 1953

Department III

			Unit Net Sales	Net Dollar Sales	Cost of Goods Sold	Cost of Goods Sold % to Sales
3350	Product M	1954	700,000 Lbs.	$68,600	$42,600	62.1%
		8 Mos. 1953	432,400 Lbs.	39,400	25,800	65.5%
3420	Product N	1954	1,600,000 Lbs.	139,700	84,800	60.7%
		8 Mos. 1953	923,550 Lbs.	80,900	48,200	59.6%
3430	Product O	1954	528,500 Lbs.	47,300	28,700	60.7%
		8 Mos. 1953	295,400 Lbs.	26,300	15,800	60.1%
4910	Product P	1954	204,400 Lbs.	38,000	14,700	38.7%
		8 Mos. 1953	40,000 Lbs.	7,100	2,900	40.8%
8110	Product Q	1954	886,200 Lbs.	53,600	37,000	69.0%
		8 Mos. 1953	436,852 Lbs.	28,600	18,200	63.6%
	Other Products	1954		62,800	36,600	58.3%
		8 Mos. 1953		49,800	28,300	56.8%
	Total Department			$410,000	$244,400	59.6%
				232,100	139,200	60.0%

FORECASTING AND STATISTICS DEPARTMENT

BUDGET GROUP (A) APPLIES UNIT COSTS, (B) RESUMMARIZES AND RETURNS TO SALES, AND (C) CONVERTS DATA FOR PLANTS INCLUDING CAPTIVE USAGE AND INTER-PLANT SHIPMENTS.

EXHIBIT IV

SALES MAKES ANY NECESSARY REVISIONS IN THE FORECAST

ALL DEPARTMENTS PREPARE EXPENSE BUDGETS

Product: PRODUCT A   Unit: Lb   Basis: [illegible]   Code: [illegible]

Plant 1

		Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Year
1953	Units							Change No II						
1953	$ Sales/Unit													
1954 Budget	Units	1,950,000						2,450,000						26,400,000
1954 Budget	$ Sales/Unit	.0312												
1954 Budget	Net Sales	60,840	60,840	60,840	60,840	60,840	60,840	76,440	76,440	76,440	76,440	76,440	76,440	[illegible]
1954 Budget	$ Cost/Unit	.0250												
1954 Budget	Cost of Goods Sold	48,750	48,750	48,750	48,750	48,750	[illegible]							
1954 Budget	Product Sell. Exps.	3,000	3,000	3,000	3,000	3,000	[illegible]							
1954 Budget	Product Earn.	9,090	9,090	9,090	9,090	9,090	[illegible]							

Plan[illegible]

		Jan	Feb	Mar	Apr	May	June
1953	Units						
1953	$ Sales/Unit						
1954 Budget	Units	200,000					
1954 Budget	$ Sales/Unit	.0320					
1954 Budget	Net Sales	6,400	6,400	6,400	6,400	6,400	6[illegible]
1954 Budget	$ Cost/Unit	.0260					
1954 Budget	Cost of Goods Sold	5200	5200	5200	5200	5200	5[illegible]
1954 Budget	Product Sell. Exps.	300	300	300	300	300	
1954 Budget	Product Earn.	900	900	900	900	900	

BUDGET PROGRESS REPORT

[illegible]

1954 Budget Proposal

ADMINISTRATIVE EXPENSES

Account No. 3503   Department Name: Department

Expense Class. Code	Expense Classification	Current Year Budget	Expense This Month	Expense Year to Date	1954 Budget
010	Salaries	44 200 00		25 831 56	46 500
~~090~~	~~Supper Money~~	100 00		10 50	
110	Cost of Living Bonus	1 000 00		1 315 35	1 000
440	Plant Visits	100 00			100
011	Individual Expenses	1 500 00		599 64	1 300
202	Staty Office Supply	500 00		752 63	600
221	Special Forms	1 000 00		210 19	200
~~232~~	~~Photostats~~	100 00		17 70	
~~302~~	~~Minor Office Equipment~~			18 50	
332	Maintenance of Office Equipment	400 00		398 35	500
~~402~~	~~Cost [illegible]~~			75	
502	Telephone	200 00		137 76	200
702	Central Steno Department	300 00		18 02	100
812	Offset Mats, Plates			123 75	200
~~862~~	~~Address Plates~~			68 97	
892	Other Address Sup.			657 54	600
~~985~~	~~Novelties~~			2 48	
081	Dues and Subscriptions	100 00		70 00	100
~~938~~	~~Books and Charts~~	100 00		2 20	
998	Other Misc. Exp.			4 79	200
		51 600 00		30 230 68	51 300

BUDGET GROUP APPLIES PRODUCT SELLING EXPENSES TO SALES FORECAST FOR PRODUCT EARNINGS....

EXHIBIT V

....AND SUMMARIZES PRODUCT EARNINGS, DEPARTMENT EARNINGS, AND OPERATING EARNINGS

DISTRIBUTED TO OPERATING LEVELS AS PROPOSALS

1954 Budget

Fourth Preliminary Forecast of Product Earnings - October 31, 1953

Department VII

			Unit Net Sales	$ Sales per Unit	Dollar Net Sales	Cost per Unit	Cost of Goods Sold and Delivery Exp.	Product Selling Expense	Product Earnings	Product Earnings per Unit	Product Earnings % of Net Sales
6014	Product S	1954	105,000 cs.	$5.3665	$563,487	$2.8537	$299,641	$41,600	$222,246	$2.1166	39.4%
		9 mos. 1953	87,169 cs.	5.1742	451,026	2.8024	244,280				
6114	Product T	1954		5.4114	119,106	2.8704	63,177		48,029	2.1821	40.3%
		9 mos.		5.0615	87,524	2.8020	48,453				
7504				4.6901	174,378	2.3080	86,550				
				4.6149	8,676	2.3170	4,356				
				6.1920	77,400	3.2698	40,873				
				4.8897	60,872	3.3208	41,341				
				10.1200	121,440	5.8458	70,150				
				10.1599	97,088	5.8355	55,764				
					275,997		192,74				
					240,726		156,53				
					$1,351,808		$753,1				
					945,912		550,				

1954 BUDGET

Proposed Department Earnings as of October 31, 1953

RK Department

NET SALES OF ALL PRODUCTS (1)		$0,000,000
Cost of Goods Sold and Delivery Expenses of all Products (1)		000,000
Product Selling Expenses of All Products (2)		00,000
PRODUCT EARNINGS OF ALL PRODUCTS		000,000
Department Selling Expenses:		
Headquarters (2)	$00,000	
Regional Sales Supervisors (2)	00,000	
Salesmen (2)	000,000	000,000
DEPARTMENT EARNINGS 1954		$ 000,000
(9 Months 1953)		(000,000)

(1) From the Fourth Preliminary Forecast of Product Earnings.

(2) From the Expense Budget Proposals.

FORECASTING AND STATISTICS DEPARTMENT

1954 BUDGET

Fourth Preliminary Forecast of Product Earnings and, Proposed Fixed Budgets

October 31, 1953

Parent Company

	1954	9 Months 1953
NET SALES	$00,000,000	$00,000,000
Cost of Goods Sold and Delivery Expense	00,000,000	00,000,000
Product Selling Expenses	000,000	
Department Selling Expenses	0,000,000	0,000,000
Sales Division Staff Expenses	000,000	000,000
Administrative Expenses	0,000,000	0,000,000
OPERATING EARNINGS	$0,000,000	$0,000,000

Forecasting and Statistics Department

EXHIBIT VI

DIVISION MANAGERS REVISE SALES FORECASTS AND EXPENSE BUDGETS

1954 Budget

Fourth Preliminary Forecast of Product Earnings, Prepaid Fixed and Subsidiaries Budgets

Consolidated

Parent Company				
NET SALES				$00,000,000
Cost of Goods Sold and Delivery Expense			$00,000,000	
Selling Expenses			0,000,000	
Office of the President	$000,000			
Public Relations	00,000			
Washington, DS Office	0,000			
Executive Offices		$000,000		
Financial Division		0,000,000		
Manufacturing Division (Phila.)		000,000		
R & D Division (Gross)	$0,000,000			
Less: Charges to Others	-000,000			
Research and Development Division		$0,000,000		
Personnel and Labor Relations Division		000,000		
Administrative Expenses (Gross)		$0,000,000		
Less: Charges to Subsidiaries		-000,000		
Administrative Expenses (Net)			0,000,000	
Total Costs and Expenses				00,000,000
OPERATING EARNINGS				$0,000,000
Subsidiaries				
Pennsalt of Washington				0,000,000
Sharples Chemicals				000,000
Pennsalt International Corporations				$00,000
Utilities				000,000
CONSOLIDATED OPERATING EARNINGS				$0,000,000

Forecasting and Statistics Department

EXHIBIT VII

BUDGET GROUP COMPARES SALES FORECAST WITH ACTUAL DAILY....

DAILY SALES SUMMARY

Parent Company	Sales for the Month So Far	Latest Estimate — Total Month	Sales at this Time Last Month
Industrial Chemicals	000,000	0,000,000	000,000
Agricultural Chemicals	00,000	00,000	00,000
B-K	00,000	000,000	00,000
Household Products	00,000	00,000	00,000
Laundry and Dry Cleaning	00,000	000,000	000,000
Metal Processing	00,000	000,000	000,000
Maintenance Chemicals	00,000	00,000	00,000
Corrosion Engineering Products	0,000	00,000	00,000
Sales Development	00	0,000	0,000
Divisional Products	0	0,000	0
TO CUSTOMERS	000,000	0,000,000	0,000,000
To Pennsalt of Washington	00,000	00,000	
To Pennsalt International	00,000	00,000	00,000
To Sharples Chemicals	00,000	00,000	
To Utilities	00,000	00,000	
PARENT COMPANY	000,000	0,000,000	0,000,000
Subsidiaries			
Pennsalt of Washington	000,000	0,000,000	000,000
Pennsalt International	0,000	000,000	000
Sharples Chemicals	00,000	000,000	000,000
Utilities	00,000	00,000	0,000
Less: Inter-Company Sales	-00,000	-000,000	-00,000
TOTAL	$000,000	$0,000,000	$0,000,000

Date Issued November 12, 1953

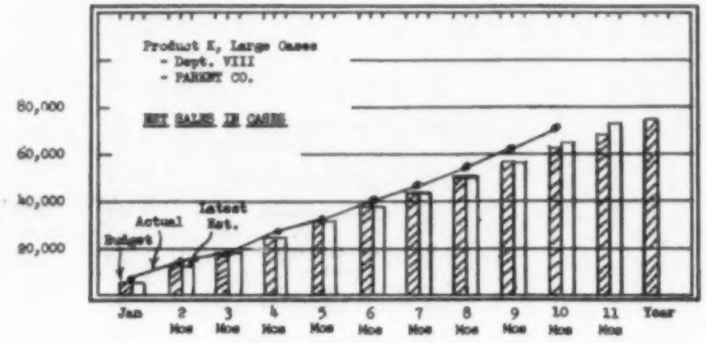
Summary No. 7 of 20 for the month

Distribution:
Daily: B41, C20, D11, File
Weekly: A7, B2, B10, B16, B41
C20, C28, D11, E2, L9
M15, T16, S12, Z0

Forecasting and
Statistics Department

1953 BUDGET REPORT

No. 372
Issued Nov. 10



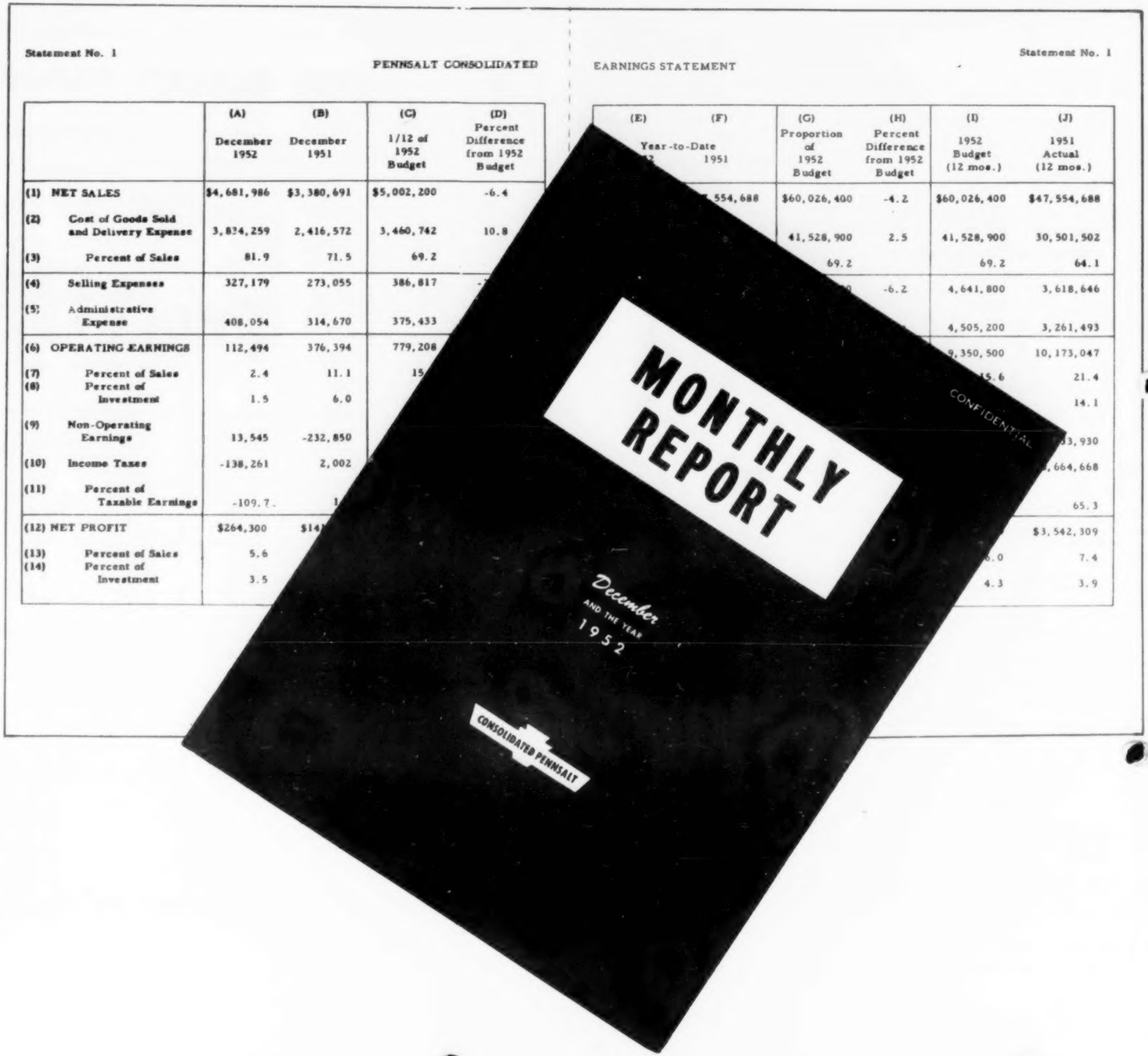
	Actual	1953 Budget		Latest Estimate	
		Amount	Difference	Amount	Difference
Jan	6,853 cases	6,350 cases	7.9%	6,350 cases	7.9%
2 Mos.	15,280 "	12,700 "	20.3%	12,700 "	20.3%
3 Mos.	19,122 "	19,050 "	0.4%	19,050 "	0.4%
4 Mos.	27,449 "	25,400 "	8.1%	25,400 "	8.1%
5 Mos.	33,260 "	31,750 "	4.8%	31,750 "	4.8%
6 Mos.	40,407 "	38,100 "	6.1%	38,100 "	6.1%
7 Mos.	47,593 "	44,450 "	7.1%	44,450 "	7.1%
8 Mos.	55,557 "	50,800 "	9.4%	50,800 "	9.4%
9 Mos.	63,389 "	57,150 "	10.9%	57,150 "	10.9%
10 Mos.	71,805 "	63,450 "	13.2%	65,100 "	10.3%
11 Mos.		69,450 "		73,100 "	
Year		75,150 "			

Distribution:

FORECASTING AND STATISTICS DEPARTMENT

....AND MONTHLY FOR ALL MANAGEMENT LEVELS

EXHIBIT VIII



Statement No. 1

PENNSALT CONSOLIDATED EARNINGS STATEMENT

Statement No. 1

	(A) December 1952	(B) December 1951	(C) 1/12 of 1952 Budget	(D) Percent Difference from 1952 Budget	(E) Year-to-Date [illegible]	(F) Year-to-Date 1951	(G) Proportion of 1952 Budget	(H) Percent Difference from 1952 Budget	(I) 1952 Budget (12 mos.)	(J) 1951 Actual (12 mos.)
(1) NET SALES	$4,681,986	$3,380,691	$5,002,200	-6.4	[illegible]	[illegible]	$60,026,400	-4.2	$60,026,400	$47,554,688
(2) Cost of Goods Sold and Delivery Expense	3,834,259	2,416,572	3,460,742	10.8	[illegible]	[illegible]	41,528,900	2.5	41,528,900	30,501,502
(3) Percent of Sales	81.9	71.5	69.2	[illegible]	[illegible]	[illegible]	69.2		69.2	64.1
(4) Selling Expenses	327,179	273,055	386,817	[illegible]	[illegible]	[illegible]	[illegible]	-6.2	4,641,800	3,618,646
(5) Administrative Expense	408,054	314,670	375,433	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4,505,200	3,261,493
(6) OPERATING EARNINGS	112,494	376,394	779,208	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10,173,047
(7) Percent of Sales	2.4	11.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	21.4
(8) Percent of Investment	1.5	6.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14.1
(9) Non-Operating Earnings	13,545	-232,850	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
(10) Income Taxes	-138,261	2,002	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
(11) Percent of Taxable Earnings	-109.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	65.3
(12) NET PROFIT	$264,300	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$3,542,309
(13) Percent of Sales	5.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.4
(14) Percent of Investment	3.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.3	3.9

THE BUDGET OF ALL ELEMENTS OF NET PROFIT COMPARED WITH ACTUAL FOR THE DIRECTORS AND TOP MANAGEMENT

PROJECTING FUTURE CAPITAL EFFECTS

Horace G. Hill, Jr., Budget Director - The Atlantic Refining Company

LONG-RANGE FORECAST

The starting point of capital expenditure policy is at the grass roots of the enterprise where someone has appreciated his responsibility for making the best use of the investment entrusted to him and has a constructive idea. If he can obtain a certain amount of capital funds, he is convinced that he can invest these funds in such a way as to produce incremental net receipts, in sufficient quantity and in a short enough space of time, to indicate an attractive rate of return. He discusses his idea with his associates to see whether they can find any flaw in his reasoning. He finally presents it to his department head who convinces him that it should be given serious consideration. The department head may point out that the success of the proposal will depend upon the ability of some other department to supply or dispose of the increased quantity, and he makes that check promptly. If no obstacles have appeared in these operational reviews, the department head asks the engineering division to criticize any phase of the proposal to which some technical objection might be raised, including the rough estimate of the project cost. The idea is then ready for a computation of its probable rate of return and a forecast of when it will become an accomplished fact. The accumulation and coordination of these ideas provide the basis for the long-range forecast in its preliminary form.

In the meantime top management, through its staff or other available services, is exploring the outside factors which might exert appreciable influence on the company operations. These would include the probable trends in General Business Level, Material Prices, Labor Rates, Finance Market, Industry Competition, Specific Product Demand, Etc.

As the long-range capital expenditure forecast takes more definite shape, it is possible for the proper operating and staff personnel to agree on the composition of a forecast balance sheet, which should be made for each year. This step will give assurance that nothing has been missed, even though some features might have been treated superficially. The relationship between the plant account and the inventories, accounts receivable and profit are the principal points to watch. The cash account will be the balancing figure and will indicate the need for financing.

Although the capital expenditure projects, around which the forecast is being built, will show their effects through the project life span of between ten and thirty years, many companies are using three years although five years is the most popular span. The reason is that in most industries it is impossible to foresee the specific items of expansion or improvement which will appear five years hence.

When the preliminary long-range forecast has been properly clothed in its balance sheet garb, it is ready for discussion with the financial officers. In preparation for this review, the financial management has re-examined the company's capital structure, felt the pulse of the debt and equity markets, formed an opinion as to what the average capital structure of the company should look like during the next twenty-five years, and computed what the average cost of capital funds might be on this basis. As an example, such a basic study might show that the company was currently overburdened with short-term bank loans, that the bond market was the most attractive source of funds at the present time while the sale of common stock held little inducement, that the long-run capital structure should show common stock equity representing 80% of total assets, and that the average capital cost on the long-run basis would be about 11%.

With this sort of financial background established in the minds of the management, the preliminary long-range forecast is examined. Proposals which indicate rates of return below the average cost of capital are the first ones to be questioned. Even though there is no apparent need for new funds from the outside, the same measure must be applied. Cash profits, equivalent to book charges for exhaustion, can be plowed back without question, but those funds must earn as much as the facilities which they replace. Profits in excess of dividends can also be plowed back but they increase the stockholders' equity exactly as if new stock had been sold, and the owners expect at least as high a return on their increased holdings. Any proposal which does not promise more than the average cost of capital is going to need some other kind of

convincing justification to win the endorsement of financial management.

The dividend forecast is then reviewed and modified by financial management on the basis of more intimate knowledge of stockholder relationships.

With these adjustments made, the impact of the long-range capital expenditure forecast can be studied. Some peaks and valleys can be removed by deferring an occasional proposal for some reasonable period. If the need for new money is of temporary duration it might be decided to finance entirely by bank loans. However, if permanent financing is required, the type must be selected and a probable schedule laid out. It is always possible that the demands for funds are in excess of what the financial management considers wise, and that may necessitate eliminating some of the least desirable proposals in order to stay within the self-imposed restriction.

Insofar as these eliminated proposals were expected to produce funds, it then becomes necessary to adjust the forecasts of net receipts and add whatever other finishing touches are required. The result is the Long-Range Forecast or the Five-Year Program, the value of which will depend entirely upon the degree of careful attention which it has received from every branch of management.

ANNUAL BUDGET

The first year of the Five-Year Program will provide the outline for the current Annual Budget. It must be understood that this outline can serve only as a general guide and not as a rigid frame-work into which the Annual Budget must be forced.

Operating management gives its first attention to the detailed capital expenditure forecast indicated for the current year. It starts with the list of open authorization and their unexpended balances, each one of which requires a separate review if any significant amount of money is involved. These should be studied from the viewpoint of how much has been already spent, whether the job will be completed in the budget year, whether the total cost or the rate of return need revision, whether its successful performance is contingent upon other capital expenditures not yet made, and whether its cancellation should be considered. If the rates of return, for purposes of the Annual Budget, are computed on the incremental basis of the additional investment needed to make the project operative, their relative value would be clearly demonstrated. It is not always convincing to claim that every authorized project is exempt from the screening process, when many of them could be cancelled with slight or no loss.

The other portions of the capital expenditure program then come up for scrutiny by the operating managers and are viewed largely as to their expected rate of return, whether they be replacements, improvements or additions. Each company must solve its own problem of how to prevent padding the capital expenditure budget as presented by the operating managers.

The next step in budget preparation is the close coordination of physical quantities or volumes of raw material and each product. This brings together the purchasing, producing, storing, distributing and selling functions to discover the most profitable level of operation and mix of products or points of sale. When this has been determined each operating organization is in a position to prepare its dollar budget, based on the capital expenditure plan and the current volume policy which have been developed tentatively.

In preparing the Annual Budget it is necessary to go into sufficient detail to permit a close comparison with accounting records during the year. It is best to have the budget made up by months throughout the year so that a performance check and analysis of deviations may be made as currently as possible.

The capital expenditures are also going to be checked each month and they must be budgeted that way. They should be in such detail that each authorization of any significant size will appear separately in the budget so that deviations can be traced to specific jobs. The tendency to place most of the annual budget in the early months of the year seems to be just as certain as crowding most of the five-year program into the first two years, but the reason is slightly different. In the case of the annual budget, the endless stream of obstructions is not foreseen, although they always happen, and the forecast reflects what might be accomplished if everything went smoothly with no storms, no strikes, no rationing, no changes in plans, no troubles of any kind.

The forecast monthly balance sheet finally emerges as the preliminary budget is completed and it is then ready for conference with the financial management. Any significant difference from the first year of the Five-Year Program should be explained. Then the monthly course of the cash position is followed through the budget year. The contemplated use of long-term rentals or lease-back arrangements, as a substitute for capital expenditures, is uncovered to be sure that the fixed liability burden is not going to become a major burden. Any probable changes in dividends or labor rates are debated, as to whether some cash cushion chould be provided.

If the indicated demand for cash is higher than the financial management believes it can provide without some danger, there will probably be an attack on the continually growing inventory and the large amounts of money which would be available if operating management would be willing to function with less stock on hand. Inventory is one of the unsolved problems in many industries and it is no wonder that financial management prefers to see its procured funds invested in some more lucrative manner.

When the financial officers have made their contribution and when the necessary adjustments have been made, the Annual Budget is ready for presentation to the Board of Directors for formal adoption. This establishes the pattern for comparison throughout the year by the monthly performance reports and the analysis of the deviations. However, the adoption of a budget should not be interpreted as freezing anything in a way which would force management to follow a prescribed path if some better path could be discovered. A few companies have considered the adoption of a capital expenditure budget as the equivalent of authorization or appropriation, while the great majority continue to view the budget merely as the company's road map on which the probable course has been marked subject to change if circumstances warrant it.

SEMI-PERFORMANCE STUDIES

Another form of projected capital effects has grown out of the practice of obtaining partial performance reports on capital projects. Most companies find it difficult, or even impossible, to make a thorough check on the profitability of a capital project completed a few years ago and forecast to show a substantial rate of return incrementally. The accounting is seldom designed to furnish a segregated P. & L. for the project under consideration, and the dilemma of guessing what would have happened if the capital outlay had not been made throws the problem into the realm of being just another estimate. But even on this basis it is a very stimulating exercise and it can give management some real help. It can hardly be done with the wide coverage employed in the Annual Budget, which picks up everything in the consolidated company, but it can be applied to one project after another so that a continuous sampling process is under way.

From such factual performance data as are available, coupled with the type of estimates used when the project was justified, a reasonably sound performance comparison can be produced for this early life study which might be at about five years. These first few years are the most significant and can almost tell the whole story. The study will show whether the project of five years ago has been able to stand alone and deliver its promised advantages, or whether it has had to call for further capital help in order to fulfill its promise, or whether it has used additional help without being able to hold up its end. Whatever the pattern of the comparison proves to be, it will be highly instructive.

From the first step of the partial performance report, it is a relatively simple matter to complete the picture in the light of present day knowledge. If further capital expenditures are required to salvage the original project, and is this incremental outlay can show a good incremental return, that can be indicated for future budget use. If the project is performing even better than expected, and gives promise of a long profitable life, this knowledge can lead to other investments of similar type. If the performance is considered hopeless, it should be a deterrent to further efforts in that direction. Projecting beyond the history of the first few years can give much valuable information to operating and financial management.

PROJECTION CONTINUALLY

There is something very sobering about making capital expenditures. They are committing the company to a certain line of action for a long time, which is, generally twenty to thirty years.

They require large sums of money which belong to other people who expect it to be wisely used. An alert management senses these things and sees its responsibility. By constant projection into the future through the means we have been discussing, management has developed some guides to making the right decisions.

The Long-Range Forecast encourages comprehensive planning instead of random growth.
The Annual Budget permits careful screening and control before taking the actual steps.
The Performance Study aims at prompt remedial action and finer future selectivity.

QUESTION BOX

Question: Recently, a statement was made to the effect that every budget that was ever installed has been actively or passively resisted by production personnel, from the manufacturing vice-president to the bottom of the line. Do you subscribe to this belief?

Answer: We cannot believe that this condition persists generally when there is true, enlightened budgetary control. No budget should be contemplated or installed except with the participation of divisional, departmental or supervisory management in its preparation. This area of cooperation may extend further down the line to include individuals having peculiar or precise knowledge of factors influencing the establishment of the budget. Time must be devoted to indoctrination and to an explanation of budgetary aims and goals. The budget can be an aid for all levels of management and its usefulness is no greater than the degree of its acceptance.

Basically, a person will strive to carry out plans which he has helped to make. He should be informed as to the relationship of the various budgets, as to conditions which are considered to be beyond his control, historical results, planning for the future and any other data that is required to insure active cooperation. Formal budget reports may not be sufficient. Monthly or other periodic meetings can be held to review estimates in the light of actual experience.

Actual results in excess of estimated expenditures are not necessarily to be criticized or made the subject of any inquisitorial action. In most cases logical clarification will be forthcoming. Measures can be then taken, with the assistance of the various levels of management, to make any required adjustments.

The introduction or amplification of budgetary control is no different than any other innovation that must be explained. Changes in processes, use of materials, working hours, departmental organizations and other similar revisions must be communicated satisfactorily to affected personnel in order to insure acceptance and understanding. Lines of communication should remain open to provide required information whether for budgets, the employees' picnic or the annual bowling tournaments. Budgets are not mystic since the employee more than likely uses one, actively or passively, for his personal or household affairs.

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